AMENDMENTS TO THE CLAIMS

Please amend the claims as follows:

CLAIM 1 (Original)

1. A battery safety monitor system, comprising:
   a) at least one battery comprising at least one cell string , wherein said at least one cell string is capable of outputting voltage signals;
   b) at least one zener diode, operatively coupled to said at least one battery cell string, capable of receiving and reducing voltage signals, and capable of outputting voltage signals;
   c) at least one safety device, operatively coupled to said at least one battery cell string, capable of preventing damage to said at least one battery cell string;
   d) a microcontroller, operatively coupled to said at least one zener diode, capable of receiving and outputting data;
   e) a display device, operatively coupled to said microcontroller, capable of receiving data, and capable of displaying at least one battery voltage level;
   f) a power supply, operatively coupled to said microcontroller and said display device, capable of supplying power to said microcontroller and said display device.

CLAIM 2 (Original)

2. The battery safety monitor system of Claim 1, wherein said safety device is selected from the group consisting of PTC, thermal fuse, fuse, isolation diode, wetness detector and optoisolator.

CLAIM 3 (Original)

3. The battery safety monitor system of Claim 1, wherein said display device is selected from the group consisting of visual alarms, audible alarms, relay switches and serial interfaces coupled to display computers.

CLAIM 4 (Original)

4. The battery safety monitor system of Claim 1, wherein said at least one battery comprises a plurality of batteries, wherein said battery safety monitor system further comprises an analog multiplexer, operatively coupled to said plurality of batteries and said at least one zener diode, capable of selectively receiving voltage signals from one of said plurality of batteries.

CLAIM 5 (Original)

5. The battery safety monitor system of Claim 1, wherein said battery safety monitor system further comprises an A/D converter, operatively coupled to said at least one zener diode and said microcontroller, capable of converting voltage signals to digital signals, and capable of outputting digital signals to said microcontroller, and capable of receiving control signals from said microcontroller.

CLAIM 6 (Original)

6. The battery safety monitor system of Claim 1, wherein said battery safety monitor system further comprises an optoisolator, operatively coupled to said microcontroller, said power supply and said at least one display device, capable of preventing reverse currents, and capable

of receiving and transmitting digital signals, and capable of receiving power from said power supply.

CLAIM 7 (Original)

7. A battery safety monitor system, comprising:

a) at least one string unit, comprising:

i) at least one battery cell string capable of outputting voltage signals;

ii) at least one safety device, operatively coupled to said at least one battery cell string, capable of preventing damage to said at least one battery cell string;

b) at least one battery monitor, operatively coupled to said at least one string unit, comprising:

i) at least one zener diode capable of receiving and reducing voltage signals, and capable of outputting voltage signals;

ii) a first microcontroller, operatively coupled to said at least one zener diode, capable of receiving and outputting data;

c) a data collection and display device, operatively coupled to said at least one battery monitor, comprising:

i) a display device capable of receiving data, and capable of displaying at least one battery voltage level;

ii) a power supply, operatively coupled to said battery monitor and said display device, capable of supplying power to said battery monitor and said display device.

CLAIM 8 (Original)

8. The battery safety monitor system of Claim 7, wherein said at least one battery monitor further comprises:

iii) an analog MUX, operatively coupled to said at least one string unit and said at least one zener diode, capable of selectively receiving voltage signals from one of said at least one string unit, and capable of outputting voltage signals to said at least one zener diode.

iv) an A/D converter, operatively coupled to said at least one zener diode and said first microcontroller, capable of converting voltage signals to digital signals, and capable of outputting digital signals to said first microcontroller, and capable of receiving control signals from said first microcontroller

v) an optoisolator, operatively coupled to said first microcontroller and said data collection and display device, wherein said optoisolator is capable of preventing reverse currents, and capable of receiving and transmitting digital signals, and capable of receiving power from said power supply.

CLAIM 9 (Original)

9. The battery safety monitor system of Claim 8, wherein said optoisolator further comprises:

(1) a serial interface, operatively coupled to said microcontroller and said optoisolator, capable of receiving and outputting digital signals;

(2) a connector, operatively coupled to said optoisolator and said data collection and display device, capable of receiving and outputting digital signals, and capable of receiving and outputting power.

CLAIM 10 (Original)

10. The battery safety monitor system of Claim 9, wherein said serial interface comprises a UART.

CLAIM 11 (Original)

11. The battery safety monitor system of Claim 9, wherein said connector comprises long wires.

CLAIM 12 (Original)

12. The battery safety monitor system of Claim 8, wherein said at least one battery monitor further comprises a wetness detector, operatively coupled to said A/D converter, wherein said wetness detector is capable of detecting dangerous battery conditions.

CLAIM 13 (Original)

13. The battery safety monitor system of Claim 7, wherein said data collection and display device further comprises:

iii) a second microcontroller, operatively coupled to said at least one display device and said power supply, capable of transmitting control signals, and capable of receiving and outputting power.

iv) a digital MUX, operatively coupled to said at least one battery monitor, said second microcontroller and said at least one power supply, capable of selectively receiving digital signals from one of said at least one battery monitor, and capable of receiving control signals from said second microcontroller, and capable of receiving power from said power supply, and capable of outputting digital signals.

CLAIM 14 (Withdrawn)

14. A method for a battery safety monitor system, the method comprising the steps of:

a) measuring string voltage using said battery safety monitor system;

b) determining whether string voltage dropped a predetermined amount since last measurement;

c) displaying an alert if string voltage dropped said predetermined amount and proceeding to STEP (h);

d) determining whether string voltage is below a safe threshold;

e) displaying an alert if string voltage is below said safe threshold and proceeding to STEP (h);

f) determining whether wetness is detected;

g) displaying an alert if wetness is detected and proceeding to STEP (h);

h) displaying a status of at least one battery;

i) returning to STEP (a).